(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 26 May 2005 (26.05.2005)

PCT

(10) International Publication Number WO 2005/046960 A1

(51) International Patent Classification7:

B29C 45/32

(21) International Application Number:

PCT/CA2003/001743

(22) International Filing Date:

12 November 2003 (12.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

- (71) Applicant (for all designated States except US): STACK-TECK SYSTEMS LTD. [CA/CA]; 1 Paget Road, Brampton, Ontario M5P 3L5 (CA).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): RICK, Robert [CA/CA]; 28 Rowse Crescent, Weston, Ontario M5P 3L5 (CA).
- (74) Agent: GOWLING LAFLEUR HENDERSON LLP: Milne, Peter, Suite 4900, Commerce Court West, Toronto, Ontario M5L 1J3 (CA).

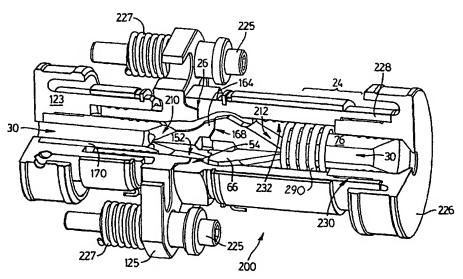
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: VALVE PIN CROSS OVER NOZZLE FOR STACK MOULD



(57) Abstract: According to the present invention, a cross over nozzle (10) is provided of two parts (22,24) which, when joined, define a housing (20) having a passage (30) extending therethrough, a tapered valve seat (50) extending about the passage and a valve member (60) having a tapered valve head (62) disposed in the passage for engaging the valve seat. The two parts (64,66) are axially separable at an interface (68) extending through the valve seat/valve head. In order to open the valve, both valve parts are first joined and then moved together as one member in the same direction relative to the housing axially away from the valve seat. Similarly, the valve members are jointly moved into engagement with the valve seat before the cross over nozzle is separated. Accordingly, unlike the valve gate design, the valve interface between the two parts of the valve head isn't exposed to molten resin and therefore molten resin isn't trapped therebetween to cause a string upon opening.

